

Monographic Journals of the Near East

General Editor: Giorgio Buccellati

# *Afroasiatic Linguistics*

Editor: Robert Hetzron, Santa Barbara

Associate Editor: Russell G. Schuh, Los Angeles

Advisory Board:

Ariel Bloch, Berkeley

John B. Callender, Los Angeles

Talmy Givón, Los Angeles

Thomas G. Penchoen, Los Angeles

Stanislav Segert, Los Angeles

---

Volume 3

Issue 6

December 1976

*The Semitic External Plural  
in an Afroasiatic Perspective*

and

*Consonant Apophony and Consonant Alternation  
in Bilin Plurals*

by

Andrzej Zaborski



Undena Publications

Malibu 1976

## ***AFROASIATIC LINGUISTICS***

AAL includes contributions in linguistics within the vast domain of Afroasiatic (Hamito-Semitic) languages. Articles of general, theoretical interest using Afroasiatic material, descriptive, historical and comparative studies are included.

Editor: Robert Hetzron (1346 San Rafael, Santa Barbara, Ca. 93109, U.S.A.)

Advisory Board: A. Bloch, J. B. Callender, T. Givón, T. G. Penchoen, S. Segert.

---

## ***MONOGRAPHIC JOURNALS OF THE NEAR EAST***

MJNE is a system of journals on the Near East, with each journal devoted to a specialized study area, and each issue consisting of a single article. Current journals in the system are *Afroasiatic Linguistics* and *Assur.*

### **General Subscription**

For a prepayment of \$12.50 the subscriber selects random issues from within the entire system as desired, up to a total of 200 pages. The subscriber is also entitled to (1) periodical lists of abstracts from all journals in the system, and (2) reservation to any journal within the system, whereby issues of a given journal are sent on approval immediately upon publication (and may be returned within two weeks).

### **Library Subscription**

A prepayment of \$12.50 for each journal in the system secures all issues of a single volume as soon as they are published. This subscription schedule does not allow the selection of random issues; in return, a discount is provided in the form of a greater number of pages for the basic price of \$12.50 (since a volume will normally include more than 200 pages).

Library subscriptions are available to both institutions and individual scholars.

Individual issues are numbered *sequentially* within each volume. Each issue has its own pagination. A volume is closed when a total of between 200 and 250 pages is reached.

A *title page* and a *table of contents* listing all issues within each volume are sent to all subscribers at the close of a volume.

*Periodicity* in the order of appearance of issues is not predetermined. A volume, however, is generally completed within one year.

Institutional and Professional discount of 20% on single subscriptions (higher on larger orders). Payment must accompany orders from individuals. A handling fee of 80¢ will be charged to Libraries if order is not prepaid. Order from: UNDENA PUBLICATIONS, P.O. Box 97, Malibu, California 90265, U.S.A.

---

© 1976 by Undena Publications.

All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photo-copy, recording, or any information storage and retrieval system, without permission in writing from the publisher.

*This paper is part of the  
Proceedings  
of the  
First North-American Conference on Semitic Linguistics  
Santa Barbara, California  
March 24-25, 1973*

**THE SEMITIC EXTERNAL PLURAL  
IN AN AFROASIATIC PERSPECTIVE**

by

*Andrzej Zaborski  
Cracow, Poland*

Vocalic lengthening is not to be reconstructed as a plural-marker in Afroasiatic. Rather there was *-w* that assimilated in Semitic to the preceding vowel. This *-w ~ -uwa* is well attested in the various branches of Afroasiatic. The other plural suffix attested is *-ān*.

TABLE OF CONTENTS

	page
TABLE OF CONTENTS . . . . .	1
1. LENGTHENING AS AN EXPONENT OF THE PLURAL . . . . .	1
2. THE SUFFIX <i>-w</i> . . . . .	2
2.1. Egyptian . . . . .	2
2.2. Berber . . . . .	3
2.3. Cushitic . . . . .	4
2.4. Chadic . . . . .	6
3. THE SUFFIX <i>-ān</i> . . . . .	6
4. CLOSING REMARKS . . . . .	6
REFERENCES . . . . .	7

1. LENGTHENING AS AN EXPONENT OF THE PLURAL

In the traditional studies on comparative Semitics (Moscatti 1964, 1954, Lekiaschvili 1963, Brockelman 1908) the existence of "portmanteau morphemes" of plural, i.e. nominative *-ū*, genitive/accusative *-ī*, has been taken for granted. In some newer, descriptively, or rather distributionally, influenced studies, length has been interpreted as the morpheme of plural both for the masculine and the feminine, though with different distribution.<sup>1</sup> This analysis

<sup>1</sup>I.J. Gelb (1969:48-57, 219) ascribes the same position to the morpheme of number, i.e. "after" the morpheme of gender and "before" that of case. This may be a solution in a

may be acceptable in a synchronic description (there may be alternative solutions and the whole problem may have a rather different aspect in a generative-transformational framework), but it must not be equally valid from a diachronic point of view.

An objection has been recently raised by Kuryłowicz who says: "lengthening of the singular endings *-u*, *-i* would be without a parallel, since lengthening is attested only in roots and in (detachable) suffixes like *-at-*, *-an-*, *-am-*" (Kuryłowicz 1972:39). The difference between the masculine and the feminine "regular" plurals is not negligible at all. In the former, length apparently occurs with the case suffix (the masculine morpheme being  $\emptyset$ ), and in the latter it occurs with the vowel of the gender suffix. This difference is very significant and can by no means be underestimated in a historical study. A hypothesis advanced by Kuryłowicz claims: "It is just possible that in Semitic the change  $u > i$  occurred also in the suffix *-uy-*. The regular masc. pl. in *-ū* (nom.), *-ī* (gen.-acc.) could, just like the "broken" plurals of South Sem., represent an old collective. The suffix *-uy-* (*+tu* in *-ūtū* < *-uytu*) forms abstract nouns in Akk., Heb., Aram. and Eth. It also functions as the pl. ending of masc. adjectives in Akk. *damqu* 'good': pl. *damqūtū*. Therefore the nom. *-uyū-* > Akk.Ar. *-ū*. gem. *-uyi* > *-ūī* > Akk.Ar. *-ī*, may continue an old collective suffix. This is more probable than a hypothetical lengthening..." (Kuryłowicz 1972:39, cf. Brockelmann 1908:415-6).

## 2. THE SUFFIX *-w*

### 2.1. Egyptian

For a long time the Egyptian plural, recorded as *-w* (masc.), *-wt* (fem.), e.g. *sn* 'brother', pl. *snw*; *snt* 'sister', pl. *snwt*, has been considered a cognate of Semitic *-ū*. There is, however, no consensus among Egyptologists as to the actual form of this suffix. In the older studies it was interpreted as *-<sup>h</sup>w* (Sethe 1923:203), and more recently as *-āw* (Edel 1955:115). W. Vycichl pronounced himself in favor of interpreting it as *-ū*, but it must be pointed out that the relation of this suffix with the Semitic plural *-ū* considered Proto-Semitic was one of Vycichl's main arguments (Vycichl 1955). Later on, J. Vergote, emphasizing the fact that the consonantal value of *w* in the feminine plural had never been doubted, proposed a new solution. According to him, only a reading *-wu* accounts for all the variations displayed by the numerous noun patterns in Coptic (Vergote 1969).

On the evidence of the Egyptian feminine plural W. Vycichl also advanced another hypothesis: that Arabic *-āt* originated in *\*-awat* (Vycichl 1958:178). This idea was further developed by K. Petrāček (1965:228) in his important work on the isomorphism of the Arabic plural. Petrāček interpreted the Egyptian plural as *-w/-ū*, and this seems to be the best solution indeed.

distributional analysis (dubbed by him "sequential"), but there may be alternative solutions depending on several factors, e.g. on how we establish the basic oppositions. Distributional analysis need not lead to explicit, unequivocal solutions (segmentations). For instance, Gelb is insisting on taking length as the morpheme of plural, independent of gender, and comes to the conclusion that *-t* "is not part of the Fem. marker, but a consonantal glide introduced secondarily between the vowel of gender and that of case." According to him, only *a/i* represent the feminine. Consequently, he must consider the morphemes of the masculine and of the case (nominative) as two distinct, though homophonous, *-u-*. For alternative solutions, see E. Reiner (1966:59-67). Both analyses are synchronic (though Gelb makes also diachronic conclusions) and may be valid, but in a comparative-historical treatment, we are forced to treat *-at* ~ *-t* as the suffix of the feminine. On its prehistory, see Kuryłowicz (1972:137-48). Other Afroasiatic languages provide good support in this respect.



Whatever further modifications Egyptologists may propose in the future, it is quite probable that there was in Egyptian one plural morpheme both for the masculine and for the feminine with the semivowel  $-u-$  having positional allomorphs (e.g. vocalized in some positions:  $-ū-$ , or, combined with a vowel, appearing as a diphthong). In any event, the close relationship of the Semitic and the Egyptian plural endings appears to be a most plausible hypothesis,<sup>2</sup> also corroborated by the fact that in Egyptian also, abstract nouns as well as verbal nouns are formed by means of a suffix  $-w$ , and  $-wt$  is used for abstract and collective nouns (Edel 1955/64:98-108 and Addenda in Vol. 2, Vergote 1970a and 1970b:539-41). This is a perfect parallel to the development abstract > collective > plural attested in Semitic.

## 2.2. Berber

Berber offers further data supporting this hypothesis. The plural suffixes  $-u-$ ,  $-au-$ ,  $-iu-$  occur both with masculine and feminine:

SINGULAR		PLURAL
<i>im-i</i>	'mouth'	<i>im-au-ḏn</i>
<i>ir-i</i>	'nape'	<i>ir-au-ḏn</i>
<i>ils</i>	'tongue'	<i>ils-au-ḏn</i>
<i>iγf</i>	'head'	<i>iγf-au-ḏn</i>
<i>ūdem</i>	'face'	<i>udm-au-ḏn</i>
<i>t-e-nell-i</i>	'rope'	<i>te-nell-u-in</i>
<i>t-a-gell-a</i>	'bread'	<i>t-i-gell-iu-in</i>
<i>mess-i</i>	'master'	<i>mess-au [sic]</i>

Most probably, these represent the plurals of plurals, i.e. forms with two plural morphemes. Such forms are well known in Semitic and are numerous in Cushitic, and they also occur in Chadic. It was H. Schuchardt who first interpreted these Berber forms as containing the older suffix  $-u-$ , as against earlier theories advanced by René Basset and some other scholars who regarded  $-u-$  as a survival of a word-final vowel which is no more attested in the singular, but has been preserved in the plural before the plural suffix. Without referring to Schuchardt, E. Zylharz, in his important 1931 article, presented an internal reconstruction of the Berber plural forms, postulating also the existence of an original  $-u-$  suffix.<sup>3</sup> It is

<sup>2</sup>We must also mention Diakonoff's standpoint (1965:62-3). According to him,  $-ā-$  is the suffix of the plural in Egyptian, placed between the stem and the gender suffix:  $-u-$  for the masculine and apparently  $-t$  for the feminine. Actually, Diakonoff's hypothesis is based on Edel's reconstruction of the Egyptian plural and this results in some contradiction, since the latter's reconstruction of the plural suffix as  $-āw$  is, in turn, based on the evidence of Berber, namely on the internal reconstruction by Zylharz, which Diakonoff, following A. Basset, does not accept. There seems to be actually no evidence for regarding the Afroasiatic individualizing > plural suffix  $-ān-$  as " $-ā-$  + nunation." I do not think that Diakonoff's type I of external plural is based on safe grounds, cf. note 8. There are no plurals in  $-ān$  in Bedaïye.

<sup>3</sup>Zylharz considered  $-u-$  "ein kompletierendes Erweiterungsformativ" added to  $-a-$  in masculine and to  $-i-$  in feminine plural suffixes. On the other hand, A. Basset claimed that  $-u-$ ,  $-au-$ ,  $-iu-$  had occurred with both genders (Basset 1952:25).

also to Schuchardt that we owe the observation that the same suffix is used for verbal nouns, e.g. Touareg *t-erh-ay-t* 'love' (from *erhi* 'to love'). The parallel with Semitic and with Egyptian is quite striking.<sup>4</sup>

### 2.3. Cushitic

Let us turn now to Cushitic. The situation in the Sidamo sub-group is particularly instructive. There is a residual suffix *-ûwa* ~ *-wa* in Sidamo (Moreno 1940:24):<sup>5</sup>

SINGULAR		PLURAL
<i>anna</i>	'father'	<i>annûwa</i>
<i>rodo</i>	'brother'	<i>rodûwa</i>
<i>siqqê</i>	'stick'	<i>siqqûwa</i>

and Hadiya (Plazikowsky-Brauner 1960:43):

<i>allābō</i>	'tongue'	<i>allābûwa</i>
<i>abbāyo</i>	'brother'	<i>abbayyûwa</i>

and Darasa (Moreno 1937:114):

<i>dāyo</i>	'brother'	<i>dāyûwa</i>
-------------	-----------	---------------

The Proto-Eastern Cushitic status of this plural suffix is demonstrable in the Nuclear Low-land group. In Afar (Mahaffy n.d.:40, Colizza 1886:67-8), *-wa* is one of the most common plural morphemes,<sup>6</sup> e.g.

<i>lē</i>	'water'	<i>lēlwa</i>
<i>manfīo</i>	'sieve'	<i>manfīwa</i>
<i>bōray</i>	'blossom'	<i>borāywa</i>
<i>hangāla</i>	'brain'	<i>hangalwa</i>

In Saho (Conti Rossini 1912:120) we have:

<i>bār</i>	'night'	<i>baruwā</i> <sup>7</sup>
------------	---------	----------------------------

<sup>4</sup>The approach of the great Berberologist A. Basset (1942, 1952) was still negative. He regarded these plurals as "dérivés de pluriels en *n*, dérivés par fausse coupe, étendus analogiquement." It is true that some instances may be secondary, since *-ḡn*, *-an*, *-in* became regular plurals, while *-u-*, *-au-*, *-iu-* became redundant and could be interpreted as part of the root. Basset's "analogical" explanation is not convincing. It was largely due to his hyper-critical approach to the Afroasiatic comparison in general.

<sup>5</sup>Hudson (MS) provides a number of examples in *-uwa*, but he adds: "Nouns that have /b/ in any position in the stem often have *-bba* in the plural. *buuda* 'horn', pl. *buudubba*, *som-bo* 'lung', pl. *sombubba* ... This suggests a reconstructed plural suffix *-uba*, which ordinarily gave *-uwa* except where stems with /b/ encouraged retention of the suffix, which was then geminated." Yet an original *w* could also have been assimilated to the *b* of the stem.

<sup>6</sup>Conti Rossini (1912:120) regarded *-wā* as resulting from *-o* (< *-u*) + the plural suffix *-ā*. I think that in view of his own statement quoted above he contradicted himself.

<sup>7</sup>Welmers (1951) mentions no such plurals for Saho.

In Galla (Moreno 1939:44-5, cf. Andrzejewski 1960:63-4 and Klingenhoben 1949), the situation resembles Berber with its "plural of plural" forms, e.g.

<i>guyâ</i>	'day'	<i>guyawân</i>
<i>urġî</i>	'star'	<i>urġiwân</i>
<i>obbolêšâ</i>	'brother'	<i>obbolêwân</i>
<i>abbâ</i>	'father'	<i>abbâwôn</i>
<i>naḍḍên</i>	'woman'	<i>naḍḍênîwôn</i>

These forms may indeed be interpreted as containing the older suffix *-Vû* and the later one *-Vn* (where V stands for a vowel). Verbal nouns and infinitives are formed by means of the suffix *-u* in Galla (Moreno 1939:66-70), e.g. *goḍ-*, inf. *gōḍu* 'to do'; *bēk-* inf. *bēku* 'to know', etc., but the origin of this suffix deserves special investigation.

In Somali, *-ōw* is used for the formation of abstract nouns (*-ōw-ga* with the definite article), e.g. *ḍirōw-ga* 'construction, building', *ḥirōw-ga* 'observation', *absadōw-ga* 'fear', etc. (Moreno 1955:127). The most common plural ending of the Somali noun is *-(C)ō* (where C stands for a consonant, identical with the last consonant of the noun). There is also a rare plural suffix *-yaw*, e.g. *gabāḍ* 'girl', pl. *gabḍayaw*; *nīn* 'man', pl. *nīmanyaw*.

Thus, the Proto-Eastern Cushitic status of this suffix is rather well demonstrated. Turning to the Central or Agaw subgroup, we find in Bilin (Palmer 1958:390-1, Tucker-Bryan 1966:512) the suffix *-w* which forms the plurals of the genitival-adjectival forms, the relative forms of the verb, and some adjectives. It also occurs with the same function in Quara (Reinisch 1885:747), Kemant (Conti Rossini 1912:102, 136-7, cf. 119-20 for abstract nouns). Khamta has *-u* in *āgīr-u* 'men'. According to Conti Rossini (1912:119), the Quara demonstratives (very similar to those in Kemant) *en* 'this', *en-zō* 'these', *yīn* 'that', *yīnzō* have plural markers coming from an original *\*-zaw*. Most interesting is also the plural of ordinal numbers with *-ū* (Conti Rossini 1912:119-20, cf. Reinisch 1882:694). Bilin has a suffix *-ūna* the exact status of which is unclear.<sup>8</sup>

In the peripheral Iraqw, there are verbal nouns or infinitives in *-ū*, e.g. *lâktû* 'hunting, to hunt' from *lakâât* 'hunt', and plurals as in *kûn-ē/kûn-ū* 'mortar', but *dâ-ây-ē/dâ-ây-dû* 'liver', *ḥûr-â/ḥûr-â-dû* 'wind' (with *-ū* after consonant and *-dû* elsewhere?, cf. Tucker-Bryan 1966:575). Whiteley (1958:27) mentions a suffix *-uwa*.

It is also possible that some other instances of Cushitic *-u* and *-o* may represent an original *-Vû*, though Klingenhoben (1949:60) derives those from an Afroasiatic *\*-at*.

To sum up, the evidence of both Eastern and Central Cushitic allows us to ascribe a Proto-Cushitic origin to the suffix in question. The final reconstruction of its proto-form will be possible only after some relevant problems of Cushitic phonology and morphophonology have been clarified. Quite provisionally, we mark the recorded forms as *-uwa ~ -wa ~ -aw ~ -iw ~ -u*.

<sup>8</sup>According to Vycichl (1959:31) "An older ending, probably *-unu*, is found [in Egyptian, A.Z.] in the pronominal suffixes *-ċn* 'you, your', pl. and *-sn* 'they, their' (*-ċunu*, *-sunu*, cf. Akkadian *-kunu*, *-šunu*, Berber *-kwën*, *-sën* m.). This ending is very common in Berber languages: Shilha *argaz* 'man', pl. *irgazën*, *imi* 'mouth' pl. *imi-wen* (*\*i-r gaz-un*, *\*i-mi-w-un*)."

## 2.4. Chadic

As far as Chadic is concerned, it must be very strongly emphasized that Hausa is not the best representative of the Chadic group. It is used here because of the lack of adequate data from other Chadic languages. Though it by no means is the most archaic language of the group, it may have preserved some quite archaic traits. Furthermore, the evidence from Hausa is corroborated by the facts we already know from other Chadic languages. For Hausa, Ščeglov (1970:83) mentions the suffix *-ūwa*; *zanē* 'cloth', pl. *zannūwa*; *itācē* 'tree', pl. *itātūwa*; *kunnē* 'ear', pl. *kunnūwa*. Another plural suffix is *-ū*, e.g. *nāma/nāmū* 'animal'. It is especially important that the suffix *-wā* forms verbal nouns, e.g. (Ščeglov 1970:69) *kāma* 'to seize, catch' → *kāmawā*, *ɸitar* 'to take out' → *ɸitarwā*, *tsaya* 'to stop' → *tsayawā*. There is also a suffix of plural *-āwā*, e.g. *Batūre* 'European', pl. *Tūrāwā* (Ščeglov 1970:83). According to Osnickaya (1972:24) the suffixes *-wa* and *-uwa* have an important status in Chadic word formation. In Bade there is also a plural suffix *-awat* (Osnickaya 1972:12) which is extremely interesting. In Hausa, we also find *-unā*, e.g. *wandō* 'trousers', pl. *wandunā*; *rīgā* 'man's cloth', pl. *rīgunā*, but its origin is uncertain.

3. THE SUFFIX *-ān*

It is commonly taken for granted that *-ān* as a plural suffix in Semitic is to be equated historically with the individualizing or singulative suffix (Kurylowicz 1972:134-5, cf. also p. 132, §19; Goetze 1946) which has the same shape. The Proto-Semitic status of this suffix is made quite certain by its occurrence (as *-an*, i.e. with a short vowel, see Basset 1952:24) in Berber where it is being replaced by *-ən*, and in Cushitic, e.g. Somali *ḍagah* 'stone', pl. *ḍaghān*; *ūgah* 'egg', pl. *ughān* (cf. Andrzejewski 1964:143, who also mentions the existence of a very rare plural suffix in *-ān* with a long vowel); Galla *ilmā* 'son', pl. *ilmān* (Moreno 1939:45, cf. Klingenheben 1949, II:51, 63). In Burgi, Moreno (1938:355) compares plurals like *saanni*, *sanganni* and *rudannō* (the respective singulars: *sā* 'cow', *sangā* 'bull', *ruda* 'brother') and the collective *ilannu* 'calves' with the plurals in *-ān* of Galla and *-āl* of Somali. In the Agaw languages it is also attested in Quara *bag-ā* 'sheep', pl. *bag-an*, Xamir *nibī* 'dream', pl. *nibīy-an*, Kemant *arwā* 'plain', pl. *arwan* (cf. Conti Rossini 1912:120). In Bilin (Palmer 1958:389) "a common type of adjective has a plural stem structure with an infix *-an-*." Though some interference (especially of Agaw) with Ethio-Semitic cannot be denied, the presence of this suffix in Cushitic is not due to borrowing. Too many languages are involved, and there is also the evidence of Berber and Chadic. In the latter group, it occurs in Jegu, Bade and Logone (Osnickaya 1972:12).

## 4. CLOSING REMARKS

Before closing this survey of the external plural, it must be pointed out that internal plurals are not only Proto-Semitic, but also go back to Proto-Afroasiatic (Petráček 1960, Hetzron 1972:15). This is most probably true not only of the so-called internal *a*-plural.<sup>9</sup>

<sup>9</sup>Diakonoff (1965:63) regards internal *a*-plurals as instances of infixation of *-a-* which occurs in *-ān-*, different from internal plurals proper. I think that internal *a*-plurals cannot be dealt with separately from the problems of apophony (Ablaut) in Afroasiatic.

The comparison presented here had to be, inevitably, atomistic. It had to deal only with elements of structure in traditional morphemic terms, without taking into account the interrelations between categories and levels. First of all, it must be pointed out that no mention could be made here of the most relevant interaction between gender, case, determination and word formation in the development of the plural. In spite of all its obvious and indisputable shortcomings, I hope that this study may be a small step forward in the preparation of a wider, more sophisticated treatment of Afroasiatic problems.

## REFERENCES

- Andrzejewski, B.W. 1960. "The categories of number in noun forms in the Borana dialect of Galla," *Africa* 30:62-75.
- \_\_\_\_\_. 1964. *The declensions of Somali nouns*. London.
- Basset, A. 1942. "Sur le pluriel nominal berbère," *Revue Africaine*, 255-60.
- \_\_\_\_\_. 1952. *La Langue berbère*. Oxford.
- Bravman, M. 1947. "The plural ending -ūt- of masculine attributive adjectives in Akkadian," *Journal of Cuneiform Studies*, 1:343.
- Brockelmann C. 1908. *Grundriss der vergleichenden Grammatik der semitischen Sprachen*, I, Berlin.
- Cerulli, E. 1938. *La lingua e la storia di Sidamo*. Roma.
- Colizza, G. 1886. *La lingua "afar"*. Wien.
- Diakonoff, I.M. 1965. *Semito-Hamitic languages*. Moscow.
- \_\_\_\_\_. 1967. *Vaziki drevney Peredney Azii*. Moskva.
- Edel, E. 1955/64. *Altägyptische Grammatik*, I-II. Roma.
- Fleming, H.C. 1964. "Baiso and Rendille: Somali outliers," *Rassegna di studi etiopici*, 20:35-96.
- Gelb, I.J. 1969. *Sequential reconstruction of Proto-Akkadian*. Chicago.
- Goetze, A. 1946. "The akkadian masculine plural -ānū/ī and its Semitic background," *Language* 22:121-30.
- Greenberg, J. 1955. "Internal a-plural in Afroasiatic," in *Afrikanistische Studien Dietrich Westermann zum 80 Geburtstag gewidmet*. Berlin. 198-204.
- \_\_\_\_\_. 1960. "An Afro-Asiatic pattern of gender and number agreement," *Journal of the American Oriental Society* 80:317-21.
- \_\_\_\_\_. 1964. *The languages of Africa*. The Hague.
- Hetzron, R. 1972. *Ethiopian Semitic*. Manchester.
- Hudson, G. MS. "Highland East Cushitic."
- Klingenheben, A. 1949/52. "Zur Nominalbildung im Galla," II. *Afrika und Übersee* 36: 45-66.
- Kuryłowicz, J. 1961. *L'apophonie en sémitique*. Wrocław.
- \_\_\_\_\_. 1972. *Studies in Semitic grammar and metrics*. Wrocław.

- Lekiaschvili, A. 1963. *La formation du genre et du nombre des noms en sémitique*. Tbilisi.
- \_\_\_\_\_. 1970. *Le système casuel en sémitique*. Tbilisi.
- Mahaffy, E. n.d. *An outline of the phonemics and morphology of the Afar (Dankali) language*. (Duplicated).
- Moreno, M.M. 1937. "Appunti sulla lingua Darasa," *Rendiconti della Reale Accademia dei Lincei* 13:211-40.
- \_\_\_\_\_. 1938. "Note di lingua Burgi," *Refista degli studi orientali* 17:350-98.
- \_\_\_\_\_. 1939. *Grammatica teorico-pratica della lingua galla*. Milano.
- \_\_\_\_\_. 1940. *Manuale di sidamo*. Milano.
- \_\_\_\_\_. 1955. *Il somalo della Somalia*. Roma.
- Moscatti, S. 1954. "Il plurale esterno maschile nelle lingue semitiche," *Rivista degli studi orientali* 29:28-52.
- Moscatti, S. 1962. "The reconstruction of Proto-Semitic," in *Trudy 25 Meždunarodnogo Kongressa Vostokovedov*, t.1., Moskva, 315-6.
- Osnickaya, I.A. 1961. "K voprosu of formah množestvennogo čisla imeni suščestvitelnogo v yazıke hausa," in *Voprosy filologii i istorii stran sovetskogo i zarubežnogo Vostoka*, Moskva, 73-7.
- \_\_\_\_\_. 1962. "Imennoye slovoobrazovaniye v yazıke hausa," *ZIE* 53:198-250.
- \_\_\_\_\_. 1972. *Imennoye slovoobrazovaniye a čado-hamitskih yazıkah*, Leningrad (Duplicated).
- Newman, P. 1967. "Feminine plurals in Hausa," *Journal of African languages* 6:245-8.
- Palmer, F.R. 1958. "The noun in Bilin," *Bulletin of the School of Oriental and African studies* 21:376-91.
- Petráček, K. 1965. "Die Isomorphie im System der arabischen Pluralbildung," in *Symbolae linguisticae Georghii Kuryłowicz*, Kraków, 227-9.
- \_\_\_\_\_. 1960. "Die innere Flexion in den semitischen Sprachen," *Archiv Orientální* 28:546-606, 29:513-45 (1961), 30:361-408 (1962), 32:185-222 (1964).
- Plazikowsky-Brauner, H. 1960. "Die Hadiya-Sprache," *Rivista degli studi orientali* 17:38-76.
- Reiner, E. 1966. *A linguistic analysis of Akkadian*. The Hague.
- Reinisch, L. 1878. *Die Sprache der Irob-Saho*. Wien.
- \_\_\_\_\_. 1882. *Die Bilin-Sprache*. Wien.
- \_\_\_\_\_. 1884. *Die Chamirsprache I*. Wien.
- \_\_\_\_\_. 1885. *Die Quarasprache I*. Wien.
- Schuchardt, H. 1908. "Berberische Studien," *Wiener Zeitschrift für die Kunde des Morgenlandes* 22:245-86.
- Sethe, K. 1923. "Die Vokalisation des Ägyptischen," *Zeitschrift der Deutschen Morgenländischen Gesellschaft* 77:145-208.
- Speiser, E.A. 1936. "Studies in Semitic formatives," *Journal of the American Oriental society* 56:22-46.
- Ščeglov, Yu.K. 1970. *Očerok grammatiki yazıka hausa*. Moskva.
- Tubiana, J. 1953/54. "Formations nominales en agaw occidental," *Comptes Rendus du Groupe Linguistique d'Études Chamito-Sémitiques* 6:3-4.
- Tucker, A.N. and M.A. Bryan. 1966. *Linguistic analyses — The Non-Bantu languages of North-Eastern Africa*. Oxford.

- Vergote, J. 1965. "Le rapport de l'égyptien avec les langues sémitiques," *MKAU* 27.4. Brussels.
- \_\_\_\_\_. 1969. "The plural of nouns in Egyptian and in Coptic," *Orientalia* 38:77-96.
- \_\_\_\_\_. 1970a. "La position intermédiaire de l'ancien égyptien entre l'hébreu et l'arabe," *Proceedings of the International Colloquium on Hamito-Semitic languages* (forthcoming).
- \_\_\_\_\_. 1970b. "Egyptian," in Th. Sebeok ed. *Current Trends in Linguistics*, vol. 6. The Hague. 531-57.
- Vycichl, W. 1955. "Gab es eine Pluralendung -w im Ägyptischen?," *Zeitschrift der Deutschen Morgenländischen Gesellschaft* 105:261-70.
- \_\_\_\_\_. 1958. "Numerus und Kasus im klassischen Arabisch," *Rivista degli studi orientali* 33:175-9.
- \_\_\_\_\_. 1959. "Is Egyptian a Semitic language?," *Kush* 7:27-44.
- \_\_\_\_\_. 1970. "Egyptian and other Hamito-Semitic languages," *Proceedings of the International Colloquium on Hamito-Semitic languages* (forthcoming).
- Welmers, W.E. 1951. "Notes on the structure of Saho," *Word* 7:145-62, 236-51.
- Whiteley, W.H. 1958. *A short item description of Iraqw*. Kampala.
- Zylharz, E. 1931/32. "Ältere und jüngere Pluralbildung im Berberischen," *Zeitschrift für Eingeborenen Sprachen* 22:1-15.





**CONSONANT APOPHONY AND CONSONANT ALTERNATION  
IN BILIN PLURALS**

by

*Andrzej Zaborski*  
*Cracow, Poland*

Bilin, a Northern Agaw language, makes a great deal of use of consonant apophony in plural-formation. This is a morphophonemic process, not a merely phonemic one. It often cooccurs with other plural-forming devices. The possible historical origin of the consonant correspondences is discussed. Other Agaw languages make only a limited use of consonant apophony; elsewhere in Cushitic it occurs sporadically. Some typologically parallel developments took place elsewhere in Afroasiatic (e.g. the hypocoristic style in Tuareg, the Hausa plural).

TABLE OF CONTENTS

	page
TABLE OF CONTENTS . . . . .	11
0. INTRODUCTION . . . . .	11
1. THE NUMBER- AND GENDER-MARKING FUNCTION . . . . .	12
2. TERMINOLOGY . . . . .	13
3. THE COOCCURRING DEVICES . . . . .	13
4. THE CONSONANT CORRESPONDENCES . . . . .	16
5. THE OTHER AGAW LANGUAGES . . . . .	19
6. THE OTHER CUSHITIC LANGUAGES . . . . .	20
7. THE OTHER AFROASIATIC LANGUAGES . . . . .	20
REFERENCES . . . . .	21

0. INTRODUCTION

Agaw languages represent a group or genetic unit which is not only very important for comparative historical studies of the Cushitic branch of the Afroasiatic family, but which is also very interesting from a typological point of view. One finds there a type of plural formation called "plurals with consonant alternation" (Palmer 1958:380, 1960:111, cf. Sasse

1974, *passim*, for Galab plurals), or "plural with consonant mutation" (Palmer 1967:1493, Hetzron 1975, 4.1.4.1. and 4.2.1.1.). The same morphophonologic device is also used in the verbal conjugation,<sup>1</sup> and, on a very limited scale, also within the category of gender, i.e. for the distinction masculine/feminine.

#### 1. THE NUMBER- AND GENDER-MARKING FUNCTIONS

As far as number is concerned, such alternations are attested in Bilin in particular. F.R. Palmer, to whom we owe the best description of the nominal system of this language, presents the following examples in which the change of consonantal phonemes (radicals!) is the sole marker of the plural:

SINGULAR	PLURAL	
ʔaxɔɾ	ʔəkɔɾ	'father'
šabɔɾ	šaʃɔɾ	'leather rope'
käbɔɾ	käʃɔɾ	'milking pail'
ʔɔbɔn	ʔɔʃɔɾ	'bladder'
mašɔɾ	maʃɔɾ	'sickle' (from Semitic)

Reinisch (1882:669-72) provides the following further examples:

SINGULAR	PLURAL	
ʃädän	ʃäsän	'seed'
amid	amis	'Thursday' (a Semitic borrowing)
abɪɾ	aʃɪɾ	'corn bag'
äg*är	äg*ät	'head'
gämär	gämat	'rope' (Semitic borrowing)
gibär	giʃät	'wooden plate'
gär	gäl	'calf' (cf. Dolgopolskiy 1973:197)
lägän	läkän	'wound'
äbɪn	äʃɪn	'guest, stranger'
arɔb	arɔʃ	'tomb'
gɔɾob	gɔɾoʃ	'body'

It must be remembered, however, that Reinisch's non-phonemic transcriptions are not to be entirely trusted (cf. Hetzron 1975, 4.0. and 4.1.2.) and the above-mentioned pairs may contrast also in other respects.

<sup>1</sup>See below and Conti Rossini (1912:27,29,31). Compare the Sidamo phonemic alternation in the verb (Moreno 1940:54ff.) and the Somali alternations which are chiefly phonemic but partly morphophonemic (Andrzejewski 1968:13ff., 24ff., 35ff., Andrzejewski 1969:51ff., 57ff., 61ff., Abraham 1962:266ff., 326ff.). Cf. also the Burunge, Gorowz and Iraqw conjugations, and Dasenech (Galab) and Afar.

As far as the category of gender<sup>2</sup> is concerned, there is:

ʔaxra                      'son'                      ʔəqʰra                      'daughter'

## 2. TERMINOLOGY

The above examples of plural-formation may be compared with the internal or "broken" plurals of Afroasiatic (especially Semitic, but attested in all the branches also including Cushitic, with some traces in Agaw itself). Indeed, this type of plural-formation was mentioned by Petráček (1961:521-3) together with plurals with vocalic apophony in his study of the internal inflection of the Afroasiatic languages. As a matter of fact, we deal here with CONSONANT APOPHONY, since the process is morphophonologic, and not merely phonologic. Therefore, the term "consonant apophony" is to be preferred to "consonant alternation." The term "alternation" is ambiguous in that it applies mainly (and properly!) to vocalic and consonantal vocalic changes which are conditioned phonemically only. The term "consonant mutation" is less ambiguous, but it has mainly diachronic associations. Also, because of the parallelism with vocalic apophony, it is preferable to talk also about a consonantal one.

## 3. THE COOCCURRING DEVICES

The examples of consonant apophony as the sole plural-forming devices are, however, quite limited in number. The cases in which morphophonemic consonantal changes merely accompany other markers of number (suffixation, tone,<sup>3</sup> or both; in borrowings from Semitic, also vowel apophony) are much more frequent. The process is now lexicalized to such an extent that the correspondence in consonants is only partly predictable.<sup>4</sup> The consonant apophony cooccurs with the following devices:

1. -a, a suffix of the SINGULATIVE,<sup>5</sup> is omitted in the plural (which is properly a COLLECTIVE, as indicated by the meaning), e.g.

SINGULAR	PLURAL	
mada	mas	'friend'
bira	bil	'ox' (cf. Dolgopolskiy 1973:204)

<sup>2</sup>The Somali pair *rag* 'men' (coll.) and *nāg* 'woman' is, of course, a coincidence (the latter also has a long vowel).

<sup>3</sup>Palmer (1960:110) uses the term "prominence" because "while the feature is phonetically largely one of pitch, it is phonologically more like stress patterns as in English or Russian. In one word one syllable only may be prominent; or the word may contain no prominent syllable." There have also been debates on the relation between tone and stress in Somali.

<sup>4</sup>Two things must be distinguished here. First, the process of number-marking involving not only the types with consonant apophony and alternation is highly lexicalized in general. Secondly, it is possible to predict the corresponding other form to some extent only as far as consonantal alternations are concerned, and it is THE SINGULAR (singulative) which IS PREDICTABLE ON THE BASIS OF THE PLURAL (collective). Hetzron (1975, 4.1.4.) points out that "the double correspondence x/k vs. x/q suggests that the second x was originally a γ." These pairs are indeed very important for an internal reconstruction of proto-Bilin (or other Agaw) consonants.

<sup>5</sup>This -a most probably goes back to \*-at, well-known in Afroasiatic.

<i>läxa</i>	<i>lak</i>	'fire' ( <i>ibid.</i> , 278)
<i>tawina</i>	<i>tak'in</i>	'clothes'
<i>²əx'ina</i>	<i>²ək'in</i>	'woman' ( <i>ibid.</i> , 213-4, cf. Kemant <i>ī(γ)wina</i> , Awngi <i>γuna</i> in Sasse 1974:15)

2. -*ā* suffix (with tone) for the singulative, and the collective has no suffix and has the tone on the last syllable, e.g.

<i>gaxā</i>	<i>gāq</i>	'cave'
<i>tix'ā</i>	<i>tīq'</i>	'light'
<i>wärābā</i>	<i>wārāf</i>	'river' (Dolgopolskiy 1973:247)
<i>gänjina</i>	<i>ganš'in</i>	'slave'

There is also an example of a Semitic borrowing with vocalic apophony:

<i>bäxlā</i>	<i>bākōl</i>	'mule'
--------------	--------------	--------

and even a genuine Bilin word (Dolgopolskiy 1973:281):

<i>dəxna</i>	<i>dəkōn</i>	'old man' (the singular has no tone)
--------------	--------------	--------------------------------------

3. -*a* for a singulative, corresponding to a plural with -*ī*<sup>6</sup> which has the tone on the initial syllable. The only example is:

<i>²äng'ā</i>	<i>²ānk'ī</i>	'palm leaf'
---------------	---------------	-------------

4. -*ā* for the singulative, the plural has partial reduplication,<sup>7</sup> and the tone is on the final syllable. The only example is:

<i>dəngā</i>	<i>dənkōk</i>	'vein'
--------------	---------------	--------

5. No suffix for the singulative, and the plural has partial reduplication, e.g.

<sup>6</sup>This is probably also Afroasiatic, connected with the feminine -*ī* (which occurs also in Chadic).

<sup>7</sup>It is interesting to see that in Bilin most of the nouns having reduplicated plurals refer to parts of the body (Palmer 1958a:387, n. 2). It is possible that some of these nouns at least originally had geminated roots which have survived in the collective forms but the gemination has been lost in the singulative ( $C_1VC_2C_2 \rightarrow C_1VC_2$ ). Dolgopolskiy (1973:197) reconstructs many geminate roots for Cushitic and Omotic. Hetzron (private letter) would like to explain plurals with partial reduplication (and internal -*a*- plurals in general) as going back to full reduplications. He writes "these repetitive occurrences [i.e. full reduplications, A.Z.] tend to be shortened, to partial reduplication, as in Agaw *ənk'* 'tooth' *ənk'ək'*, sometimes even preserving an *a*, e.g. Somali *mīs/mīsas*. I believe that the internal -*a*- is the farthest-going reduction of the original reduplication (where the repeated elements may have been connected by an *a*)."

<sup>2</sup> ab	<sup>2</sup> aḃṣḃ	'mouth' (Dolgopolskiy 1973:230-1, 135-6)
kad	kasṣ	'stomach' (Ennemor <i>käs</i> 'stomach')
tār	tālṣ	'breast bone' (cf. Tigre <i>tādṣ</i> )

6. -*ti* for plural,<sup>8</sup> e.g.

<i>nəx<sup>9</sup>ax<sup>9</sup></i>	<i>nəx<sup>9</sup>aq<sup>9</sup>ti</i>	'husband's father'
--------------------------------------	--	--------------------

## 7. No tone in the singulative, but the plural-collective has tone on the final syllable:

<i>dan</i>	<i>ṣān</i>	'brother' (Dolgopolskiy 1973:295-6)
<i>kidəŋ</i>	<i>kišṣəŋ</i>	'field'
<i>nəḣar</i>	<i>nəḣāt</i>	'chest'
<i>kəlāb</i>	<i>kəlāḃ</i>	'fence'

For gender: *kəxin/kəkīn* 'clever (masc./fem.)'

8. Consonantal morphophonemic changes cooccur also with internal plural-formations of the Tigre<sup>10</sup> type, e.g.

<i>ḃārdā</i>	<sup>2</sup> aḃrus	'horse'
<i>kənḃur</i>	<i>känäḃḃut</i>	'lip'
<sup>2</sup> ənṣəx	<sup>2</sup> änäṣṣəḣ	'spear'
<i>qəmbəx</i>	<i>qänäḃḃəx</i>	'milking pail'
<i>səx</i>	<sup>2</sup> äslūl	'seed'

There is also one example for gender-differentiation: *dan* 'brother' and *ṣanī* 'sister', the latter with a further suffix -*i* of the feminine; for an etymology, see Dolgopolskiy (1973:295).

<sup>8</sup>With a semantically masculine plural! An allomorph of this suffix actually occurs in *sarda/sardət* 'knife' which has been interpreted by Palmer (1958a:387) as a plural with reduplication, cf. *nan/nantət* 'hand', *dula/dultət* 'club'. There is also most probably a lexicalized suffix -*in* in *gänjinā/ganšin* 'slave', -*um* in *därguma/därkum* 'sycamore' (cf. Section 5, 1 below, and Littmann-Höfner 1962:523).

<sup>9</sup>The occurrence of two fricatives is due either to an assimilation (the singular is already a reduplicated form, i.e. an original collective having become a singular when a new plural was formed) or the spirantization occurred also in some closed (syllable-final) positions. Some cases of an original plural becoming a singular: <sup>2</sup>*alāla*/<sup>2</sup>*älät* 'heifer' (cf. Dolgopolskiy 1973:169, 314), cf. also the borrowing from Tigre *gəmbəx/gänäḃḃət* 'milking pail' (-*əx* < -*ət*), perhaps also *gäggira/gaggit* 'baboon'.

<sup>10</sup>Cf. Palmer (1958b), *passim*, and (1958a:388): *ḣərbät/ḣəräḃ* 'curtain of bark', *ḣəggat/ḣəgäh* 'tobacco box'.

## 4. THE CONSONANT CORRESPONDENCES

It can be rather safely assumed that the pairs in which consonant apophony is the sole marker of number (1. above) are later than those in which it is hierarchically secondary, i.e. merely reinforcing the main marker (affixation, reduplication, and probably also tone,<sup>11</sup> see 3. above). As in the case of the vowel apophony, consonant apophony must also go back to originally purely phonemic alternations. The respective consonant correspondences have been listed by Palmer (1958a:385ff, 1960:112, 1967:1493; cf. Hetzron 1975, 4.1.4.):  $b/\beta$ ,  $d/\delta$ ,  $d/s$ ,  $d/\delta$ ,  $r/\ell$ ,  $\ell/t$ ,  $\check{g}/\delta$ ,  $g/k$ ,  $g^w/k^w$ ,  $w/k^w$ ,  $x/k$ ,  $x/q$ ,  $x^w/q^w$ . Palmer (1960:112) further groups them (for singular vs. plural) into: 1. voiced vs. voiceless, 2. voiced vs. voiceless with a change in the position or type of articulation, 3. other with no distinction in terms of voicing. This grouping may be more simply and more specifically rearranged in the following manner:

## 1. Voiced (singular) vs. voiceless (plural) — DEVOICING

$d$	:	$t$
$\check{g}$	:	$s^{12}$
$g$	:	$k$
$g^w$	:	$k^w$

## 2. Plosive (singular) vs. voiceless fricative (plural) — SPIRANTIZATION + DEVOICING

$b$	:	$\beta$
$d$	:	$s^{13}$
$d$	:	$\delta$ (with a change in the position)

## 3. Velar fricative (singular) vs. velar plosive (plural) — DESPIRANTIZATION for velars only

$x$	:	$k$
$x^w$	:	$k^w$
$x$	:	$q$
$x^w$	:	$q^w$

4.  $r$  :  $\ell$  — ALTERNATION OF LIQUIDS5.  $r$  :  $t$   
 $\ell$  :  $t$  in combination with N°4.6.  $w$  :  $k^w$ 

<sup>11</sup>We do not know the history of tone in the Agaw languages and in Cushitic in general, but an alternative view that tone be the sole marker of plural as an archaic trait is not improbable.

<sup>12</sup>Though differing also in articulation, they constitute a pair from a morphophonemic point of view, cf. Hetzron 1969:4 on  $z/c$ . Reinisch (1882:670) notes the  $\check{g}/\delta$  alternation.

<sup>13</sup>Most probably  $d \rightarrow \delta \rightarrow z \rightarrow s$ , cf. Hetzron 1975, notes 16 and 24.

With the exception of *dan/ḡān* where initial consonants are involved (Dolgopolskiy reconstructs  $^{*}(\text{ʔA})_3\text{Inm}$  with an initial  $\text{ʔV-}$ , cf. Conti Rossini 1912:129-30, the latter also mentions (128) *ban/ḡan* 'emprunt'), these processes are operative only in medial and/or final consonants. The grouping according to the positions is:

MEDIAL	FINAL	MEDIAL AND FINAL IN REDUPLICATED FORMS
	<i>d:t</i>	
<i>ḡ:ḡ</i>	<i>ḡ:ḡ</i>	<i>ḡ:ḡ</i>
	<i>g:k</i>	<i>g:k</i>
	<i>g<sup>w</sup>:k<sup>w</sup></i> <sup>14</sup>	
<i>b:f</i>	<i>b:f</i>	<i>b:f</i>
<i>d:s</i>	<i>d:s</i>	<i>d:s</i>
<i>d:ḡ</i> <sup>15</sup>		
<i>x:k</i>	<i>x:k</i>	<i>x:k</i>
<i>x<sup>w</sup>:k<sup>w</sup></i>		
<i>x:q</i>	<i>x:q</i>	<i>x:q</i>
<i>x<sup>w</sup>:q<sup>w</sup></i>	<i>x<sup>w</sup>:q<sup>w</sup></i>	<i>x<sup>w</sup>:q<sup>w</sup></i>
	<i>ɬ:l</i>	<i>ɬ:l</i>
	<i>ɬ:t</i>	
	<i>l:t</i>	
<i>w:k<sup>w</sup></i>		

It can be concluded from the distribution of the pairs that the apophonies *d:t*, *g:k* and *g<sup>w</sup>:k<sup>w</sup>* go back to an alternation voiced:voiceless in stem-final position. It was the voiced alternant that was used in the non-word-final position, i.e. before a singulative *-a* or in cases of partial reduplication (for the medial consonant). The voiceless one occurred in the word-final position, in the collective form which has no ending, and as the final consonant in plurals with partial reduplication (*ḡāluda/ḡālut* 'big knife', *dəngā/dənkək* 'vein' with an assimilation of the last two consonants, cf.  $\text{ʔəng}^w\text{ɬ}/\text{ʔəng}^w\text{ək}^w$  'teat' with no such assimilation). There are two exceptions:  $\text{ʔäg}/\text{ʔäg}^w\text{ək}^w$  'maternal uncle' and *säg/sägək* 'mountain' in which the voiced consonant is not devoiced in the final position in the singular. This may be due to the fact that there is no assimilation in the plural forms.

The studies available do not mention such (phonemic!) voiced/voiceless alternations being operative in the Agaw languages. This may partly be due to the fact that we lack adequate phonemic studies in most languages, or it may reflect the fact that this is an archaic trait, possibly obliterated in many cases. As a morphophonemic device, however, DEVOICING does occur commonly in Southern Agaw, i.e. in Awnḡi, in which it distinguishes the first person singular

<sup>14</sup>The only example is *g<sup>w</sup>ädəg<sup>w</sup>/g<sup>w</sup>äsək<sup>w</sup>* 'belly' in which both the voiced and the voiceless alternants occur before a pause. It is possible that the voiceless *s* led to the devoicing of the final *g<sup>w</sup>* in the plural.

<sup>15</sup>Cf. note 12. and Reinisch (1882:670-2) where he notes an alternation *d/ḡ*, see also Conti Rossini (1912:28,43). Perhaps, like *ḡ ~ ḡ*, this is also a dialectal difference or that language changed in the meantime (unless Reinisch's transcription is not impeccable).

form of the verb from all the other persons, and in particular from the quasi-homonymous third person masculine singular, e.g. *dīg* 'he came near' vs. *díkx* 'I came near'; *ḡonḡuxā* 'he drove away' vs. *ḡonḡuxā* 'I drove away' (Palmer 1959:271, 279, 283, 285; Hetzron 1975, 4.1.4.2., 4.2.3.1.2.3.). The pairs are (Hetzron 1969:7, cf. Palmer 1967:1493): *b/p*, *d/t*, *z/c*,<sup>16</sup> *ḡ/č*, *g/k*, *g"/k"*, *ḡ/q*, *ḡ"/q"*.<sup>17</sup> Hetzron (1975, 4.1.4.2.) explains the first person singular, e.g. *sepē* 'I fight' (cf. *sebē* 'he fights', and the imperative *sēp* 'fight!') as coming from an original *\*seb+ḡē* (where *\*ḡē* is a reconstructed Sg.lc. form of an auxiliary verb) → *\*sep+ḡē* → *sepē*, i.e. devoicing before a glottal stop as well as in an absolute final position. This explanation is quite convincing. Thus, the Awngi devoicing should be interpreted as affecting originally the word-final position.

The apophony *ɾ/ℓ* goes back to an alternation of liquids also in the final position, e.g. *bīra/bil* 'ox' (Reinisch 1882:672, cf. Dolgopolskiy 1973:204), *ḡār/ḡāl(ℓī)* 'calf'. Since both *ɾ* and *ℓ* occur in the final position, it is quite possible that originally this was a free variation. Yet it is remarkable (Palmer 1960:112) that *ℓ* never follows *ɾ*, a geminate occurs instead: *ɾℓ* → *ℓℓ*.

The apophonies *ɾ/t* and *ℓ/t* (the latter is a variant of the former, since *ɾ* alternates with *ℓ* in the final position) go back to an alternation which is still operative in Bilin. According to Palmer (1960:112), *ɾ* may not occur after *ɾ*, *ℓ* or *n*, — it is replaced by *d*.<sup>18</sup> The same is true for Khamir (Hetzron 1975, note 22). The devoicing of the final *d* to *t* would then be secondary. There is also a correspondence *t/ɾ* in some other Agaw languages.<sup>19</sup>

One also finds SPIRANTIZATION in an intervocalic position (before *-a*, etc.), perhaps also in closed CVC syllables, cf. *dəxna* < *\*dəxəna/dəxən* 'old man'. Non-velar consonants are further devoiced.<sup>20</sup> Examples: *lāxa/lāk* 'fire', *wārābā/wārāḡ* 'river', *gaxā/gaqāq* 'cave' (with an intervocalic *q* because of an assimilation to the final one). There are, however, some exceptions, *mada/mas* 'friend', *ḡix/ḡikək* 'horn'. Possibly there was spirantization occurring also in C<sub>1</sub>VC<sub>2</sub> stems also before a pause, unless the divergence attested is due to an original free variation or even to some secondary reinterpretation. In the reduplicated forms, the occurrence of the plosive in the intervocalic position may be explained as due to an assimilation, but then it would still be necessary to advance a hypothesis about the development of the respective deviating forms (such as *ḡix*, etc.).

There are also some examples where the alternating plosive and fricative occur in exactly the same position: *kābār/kāḡāt* 'milking pail', *ḡədəḡ/ḡəḡəḡ* 'dog', *ḡabəḡ/ḡaḡət* 'leather rope' (did the final *ɾ* have anything to do with the retention of the voiced *b*?), etc. Once again, free variation may be reason for such forms, unless there was a difference in tone. The trouble is that we know almost nothing about the history of tone in the Agaw languages. In some cases, there is no spirantization at all, e.g. *kāba/kāb* 'bed'.

<sup>16</sup>Cf. note 12.

<sup>17</sup>Further pairs: *w/p* and *y/k* (Hetzron 1969:8).

<sup>18</sup>*Ibid.*: "*ɾ* has alternative exponents [r] and [d]." Hetzron (1975, 4.1.4.) reconstructs an older retroflex *\*ḡ* in this case. He is probably right.

<sup>19</sup>Hetzron (1975, 4.0.2.) (cf. Conti Rossini 1912:27, 29) states that Bilin and Khamir are separated from the other Agaw languages by the fact that they have a (not exceptionless) change *t* → *ɾ*, whereas the others have *t* → *y*.

<sup>20</sup>Reinisch (1885:677, 836) states that */b/* is pronounced as *[v]* in Bilin, Khamir and the Dembea dialect. Conti Rossini (1912:39) says: "Une tendance générale de tous les parlers agaw porte à changer le *ḡ* en *ḡ*: le kemant ne fait pas d'exception, p.ex. *int-oḡ* et *int-oḡ* il vint." Later he adds (39-40) "Le kemant change assez fréquemment le *k* en *ḡ*. C'est un phénomène des plus ordinaires aussi dans les autres langues agaw et en tigrāi."



Some examples actually suggest that tone was indeed a conditioning factor,<sup>21</sup> e.g. (cf. Conti Rossini 1912, §134): *kidəŋ*/*kišəŋ* 'field', *gʷədəgʷ*/*gʷəsəkʷ* 'stomach', etc., with a fricative before the tone. Yet this is not conclusive because there is also *gābāna*/*gāḡān* 'river bank' (with the tone in both forms in the same position), and the opposite in *kəxīn*/*kəkīn* 'clever', *ʔəxʷna*/*ʔəqʷən* 'brother', etc.

There is only one example of *w/kʷ*, in *tawina*/*takʷin* 'clothes', and it is obviously impossible to comment on it. This type is more frequent in Khamir (see below).

## 5. THE OTHER AGAW LANGUAGES

In the other Agaw languages, which are less known, consonant apophony and consonant alternation seem to operate on a quite limited scale. As far as the category of number is concerned, it occurs in the following languages (sg./pl.):

### 1. KHAMIR (Reinisch 1884:672, cf. 589ff)

- b:f*     *arḡ*/*arbīt* 'month'  
*t:r*     *amrā*/*amīt* 'year' (from Semitic), this alternation is very frequent in the verbal conjugation, cf. Reinisch (1884:592).<sup>22</sup>  
*d:r*     *ṣamīd*/*ṣamrā* 'companion' (a borrowing)  
*l:r*     *duqāl*/*duqārā* 'donkey'  
          *sibīl*/*sībrā* 'donkey' (cf. Bilin *sābarā*/*sāḡal*)

### *kʷ:w* (Reinisch 1884:605-6) in the other direction

- dirḡ*/*dīrunā* 'sycamore'  
*ḡīlukʷ*/*ḡīluwā* 'man' (Bilin *ḡīruwā*/*ḡurū*)  
*ḡīrukʷ*/*ḡīruwā* 'hen'  
*lūkʷ*/*luwā* 'cow'  
*ūnā*/*ukʷən* 'woman' (cf. Bilin *ḡḡīnā*/*ukʷīn* or rather *ʔəxʷina*/*ʔəkʷin*)

### *k:y* (Reinisch 1884:606-7)

- ḡīrke*/*ḡīriyā* (also *ḡīrkā*) 'day'  
*lik*/*liyā* 'fire'

### *č:y*     *mič*/*miyā* 'bread'

### 2. In KEMANT (Conti Rossini 1912:122, 128-9, cf. Hetzron 1975, 4.1.4.1, 4.1.4., based on Sasse's unpublished material):

- ḡʷ:xʷ*    *āḡʷāy*/*āxʷāt* 'head'  
          *dəḡʷārā*/*dəxʷalta* 'donkey'  
          cf. *šēḡā*/*sēxā-kan* 'young girl' (the *s* of the plural may be a misprint)

<sup>21</sup>Maybe only in the cases of *d/ḡ* and *d/s*, but this is not certain at all.

<sup>22</sup>Cf. Hetzron (1975, 4.3.2.1.2.). The same in Bilin. In Khamta, Kemant and partially in Quara, there is *t/y*.

- $x^h:k^h$      $\text{ʕnx}^h \text{ } \text{ʕ}/\text{ʕnk}^h \text{ } \text{ʔk}$  'ear'  
 $r:l$      $\text{bir}\bar{a}/\text{bil}\bar{e}$  'bull'  
           $\text{g}\bar{a}r/\text{g}\bar{a}l\bar{t}i$  'calf'  
 $k:y$      $\text{giy}/\text{gik}\bar{a}k$  'horn'
3. KHAMTA (Conti Rossini 1904:202):
- $g:x^h$      $\text{g}\bar{i}r/\text{ax}^h \text{ } \bar{e}r$  'son'  
 $k:g$      $\text{čikz}\bar{i}n/\text{čigz}\bar{u}$  'field'
4. In QUARA (Hetzron 1975, 4.2.1.):
- $\text{ž:š}$      $\text{ž}\bar{a}n$  'brother' /  $\text{š}\bar{e}n$  'sister'
5. In FALASHA (Hetzron 1975, 4.14.1.):
- $h:k$      $\text{dirhua}/\text{dirku}$  'rooster'  
 $r:l$      $\text{dugara}/\text{dugalt}$  'donkey' (-*t* suffix, Dolgopolskiy 1973:275).

## 6. THE OTHER CUSHITIC LANGUAGES

In other Cushitic languages similar morphophonemic or phonemic phenomena occur only sporadically. In Beja Reinisch (1895:167, probably quoting Almkvist) mentions the internal plural in the Bišari dialect: *māge*, sg.: *māk* 'neck'. There is also an alternation (*ibid.* 68) *dēra* ~ *dēla* 'hole, well' (both singulars in free variation). R.A. Hudson further mentions *e:ra* 'white' and *e:la* 'dirty white' and explains that the word with *l* denotes something small or less perfect than the word containing *r*. In Saho (Conti Rossini 1913:173), there is *gāšā/gōz* 'horn', *baxāl/bokalī* 'little goat'. In Afar (Mahaffy 1952:43) there is *bāda* 'son' and *barā* 'daughter'; Lucas (1935) also mentions *kabere/kaba'a* 'panther'. In the Benadir dialect of Somali, Moreno (1955:29-30, note that his transcription is phonetic) has *gābār* (from *gabaḍ* with a retroflex *ḍ*, cf. Moreno 1955:15 on [r] as an allophone of /ḍ/; cf. Abraham 1962:327) pl.: *gabdo* 'girl', *ilīg/ilko* 'tooth', *ādag/ādko* 'force', *nin/nīman* 'man', *ḥāras/ḥardo* 'horse'. Sasse (1974a, *passim*) shows similar phenomena in Galab: *ʔidīd-dī/ʔidīr-ē* 'louse', *kimid-dī/kimīrr-ī* 'small bird' (cf. Dolgopolskiy 1973:30), *ʔil/ʔinnū* 'eye', *ʔōd-ū/ʔōt-ū* 'bread', *ḡōl/ḡōl-ū* 'donkey', *ḡr/ḡōr-ū* (is there a phonemic /gʷ/?). Black (1973:24) presents Konso *il-ta/il-d-ā* 'eye'. In Gidole (Sasse, MS), one finds *il-ta/il-d-ā* 'eye', *laḥl-ta/lapa* 'ear'. Iraqw has (Whiteley 1958 *passim*, Tucker-Bryan 1966:575): *tleer/tleet* 'tall' (Alagwa *tleer/tleden*), *quqʷmar/quqʷmat* 'short', *nīna/nīnakw(?)* 'small', *dāwa/dāba* 'arm' (also in the Gorowa dialect), *darw/dāwe (?)* 'elephant', *sīrwi/sīdo* 'water pot' (Gorowa dialect: *sīri/sīdo*).

## 7. THE OTHER AFROASIATIC LANGUAGES

A search for parallel forms (only typologically speaking) in other branches of the Afroasiatic family would be desirable. Theoretically one may expect to find some. It is a well-known fact that, especially in Semitic, there exist many triconsonantal roots differing only in one radical and having the same or related meaning. Some of these are possibly due to the lexicalization of some old alternations. For such phonemic and some morphophonemic alternations, see Brockelmann (1908:204ff, 219ff, 151ff). Brockelmann does not differentiate between diachronic and synchronic processes.

In Egyptian, there is at least one example (Edel 1955:127): *jxt/jšt* 'thing, goods' (the same in *status pronominalis*, cf. *ibid.* §264).

For Berber, Prasse (1972:38L76) presents both phonemic and morphophonemic consonantal changes in Tuareg (cf. Basset 1952:5-7).<sup>23</sup>

Obviously, most, if not all, of the languages involved have morphophonemic consonant alternations, but it would be interesting to find out whether these have developed in a true apophony, as partially in Bilin.

In Chadic, Hausa exhibits a particularly interesting change before SUFFIXES beginning with *e* or *i* (but not before any /*e*/ or /*i*/, for this is a morphophonemic, and not phonemic, process): *d* → *ḡ*, *t* → *č*, *s* → *š*, *z* → *ḡ*, *w* → *y*, etc., e.g. (sg./pl.) *kaza/kaji* 'chicken', *bawa/bayi* 'slave', *hanci/hantuna* 'nose', *gaši/gasuna* ~ *gašaye* 'hair', *sippa/siŋŋoŋi* 'plan, drawing', *taki* (or *taphi*)/*tafukka* 'lake' (Taylor 1959:108, 110), *mače/mata* 'woman'; cf. *uba* 'father', *uwa* 'mother', *iyaye* 'parents'; *wa* 'elder brother', *ya* 'elder sister', *yaya/yayya* 'elder sibling (sg./pl.)'; *miji/maza* 'male'; *da* 'son', *ya* 'daughter', *yaya* 'children'; *sa* 'bull', *saniya* 'cow' (with an Afroasiatic feminine suffix) pl. *šanu* 'cattle' (Abraham 1959:27), *šanaya* 'cows' (feminine plural, cf. Taylor 1959:11, Ščeglov 1970:78ff.).

#### REFERENCES

- Abraham, R.C. 1959. *The language of the Hausa people*. London.  
 Abraham, R.C. 1962. *Somali-English dictionary*. London.  
 Andrzejewski, B.W. 1968. "Inflectional characteristics of the so-called 'weak verbs' in Somali," *African Language Studies*, 9:1-51.  
 ———. 1969. "Some observations on hybrid verbs in Somali," *African Language Studies*, 10:47-89.  
 Basset, André. 1952. *La langue berbère*. Oxford.  
 Black, Paul. 1973. *Draft sketch of Konso phonology, morphology and syntax* (duplicated).  
 Conti Rossini, Carlo. 1904. "Appunti sulla lingua khamta," *Giornale della Società Asiatica Italiana* 17:183-242.  
 ———. 1912. *La langue des Kemant*. Vienna.  
 ———. 1913. "Schizzo del dialetto saho dell'Alta Assaorta," *RRAL* 22/5, 151, 246.  
 Dolgopolskiy, A.B. 1973. *Šravnitel'no-istoričeskaja fonetika kušitskix jazykov*. Moscow.  
 Edel, E. 1955-64. *Altägyptische Grammatik*, I-II. Rome.  
 Hetzron, R. 1969. *The verbal system of Southern Agaw*. Berkeley.  
 ———. 1975. "The Agaw languages," *AAL* 3/3.  
 Kuryłowicz, J. 1972. *Studies in Semitic grammar and metrics*. Cracow.  
 Lucas, M. 1935. "Renseignements ethnographiques et linguistiques sur les Danakils de Tadjourah," *Journal de la Société Asiatique*, 5/2:181-222.

<sup>23</sup>Typologically interesting is the hypocoristic style where the following changes are observed: *d* → *d*, *t* → *t*, *z* → *z*, *q* → *k*, *ḡ* → *k*, *h* → *h*, *ɾ* → *l*, *g* → *ā* (in final position). This is a suppression of the pharyngalization ("emphasis") feature. Of course, this is a process different from the one found in the Agaw languages.

- Littmann, Erno and M. Höfner. 1962. *Wörterbuch der Tigrē-Sprache*. Wiesbaden.
- Mahaffy, F. 1952. *Notes on phonemics and morphology of the Afar (Dankali) language* (duplicated).
- Meyer-Bahlburg, H. 1972. *Studien zur Morphologie und Syntax des Mbugu*. Hamburg.
- Moreno, M.M. 1940. *Manuale di sidamo*. Milan.
- \_\_\_\_\_. 1955. *Il somalo della Somalia*. Rome.
- Palmer, F.R. 1957. "The verb in Bilin," *Bulletin of the School of Oriental and African Studies* 19:131-59.
- \_\_\_\_\_. 1958a. "The noun in Bilin," *Bulletin of the School of Oriental and African Studies* 21:376-91.
- \_\_\_\_\_. 1958b. *The morphology of the Tigre noun*. London.
- \_\_\_\_\_. 1959. "The verb classes of Agau (Awiya)," *Mitteilungen des Instituts für Orientforschung* 7:270-97.
- \_\_\_\_\_. 1966. "Bilin," *Lingua* 17:200-9.
- \_\_\_\_\_. 1967. "Affinity and genetic relationship in two Cushitic languages," in *To honor Roman Jakobson II*, 1489-96. The Hague.
- Petráček, K. 1960-64. "Die innere Flexion in den semitischen Sprachen," *Archiv Orientální* 28:547-6, 29:513-54, 30:361-408, 31:577-624, 32:185-222.
- Prasse, K.-G. 1972. *Manuel de grammaire touaregue, I*. Copenhagen.
- Reinisch, L. 1882. *Die Bilīn-Sprache*. Vienna.
- \_\_\_\_\_. 1884. *Die Chamīrsprache*. Vienna.
- \_\_\_\_\_. 1885. *Die Quarasprache*. Vienna.
- \_\_\_\_\_. 1893-94. *Die Beḍauye-Sprache*. Vienna.
- \_\_\_\_\_. 1895. *Wörterbuch der Beḍawiye-Sprache*. Vienna.
- Sasse, H.-J. 1974a. "Notes on the structure of Galab," *Bulletin of the School of Oriental and African Studies* 37:407-38.
- \_\_\_\_\_. 1974b. "Ein Subjektscasus im Agaw," *Folia Orientalia* 15:55-68.
- \_\_\_\_\_. MS. "Notes on Gidole"
- Ščeglov, J. 1970. *Očerki grammatiki jazyka xausa*. Moscow.
- Taylor, F.W. 1959. *A practical Hausa grammar*. Oxford.
- Tucker, A.N. and M.A. Bryan. 1966. *Linguistic analyses — The Non-Bantu Languages of North-Eastern Africa*. London.

## **SOURCES AND MONOGRAPHS ON THE ANCIENT NEAR EAST**

**Editors:** *Giorgio Buccellati, Marilyn Kelly Buccellati, Piotr Michalowski*

These two series make available original documents in English translation (*Sources*) and important studies by modern scholars (*Monographs*) as a contribution to the study of history, religion, literature, art and archaeology of the Ancient Near East. Inexpensive and flexible in format, they are meant to serve the specialist by bringing within easy reach basic publications often in updated versions, to provide imaginative educational outlets for undergraduate and graduate courses, and to reach the interested segments of the educated lay audience.

General Subscription — For a prepayment of \$10 the subscriber selects random issues from within the entire system as desired, up to a total of 200 pages. The subscriber is also entitled to (1) periodical lists of abstracts from both series, and (2) reservation to given categories to be specified by the subscriber (e.g. Assyriology or Egyptology).

Library Subscription — the subscription price is \$8 for Volume 1 of either the *Sources* or the *Monographs*. A volume will average 200 pages. Periodicity in the order of appearance of fascicles is not predetermined, but a volume will normally be completed within one year.

---

### ***Sources from the Ancient Near East***

#### **Volume 1**

- 1. *The Akkadian Namburbi Texts: an Introduction.* By R. I. Caplice. 24 pp., \$1.00
- 2. *Balag-Compositions: Sumerian Lamentation Liturgies of the Second and First Millennium B.C.* By M. E. Cohen. 32 pp., \$2.40

In preparation:

- *The Epic of Erra.* By L. Cagni.

---

### ***Monographs on the Ancient Near East***

#### **Volume 1**

- 1. *The Sumerian Temple City.* By A. Falkenstein. Introduction and translation by M. Dej. Ellis. 21 pp., 95¢
- 2. *Three Essays on the Sumerians.* By B. Landsberger. Introduction and translation by M. Dej. Ellis. 18 pp., 90¢
- 3. *Structure of Society and State in Early Dynastic Sumer.* By I. B. Diakonoff. Introduction by M. Desrochers. 16 pp., 65¢
- 4. *The Conceptual Autonomy of the Babylonian World.* By B. Landsberger. Translation by Th. Jacobsen, B. Foster and H. von Siebenthal. Introduction by Th. Jacobsen. 16 pp., \$1.10

In preparation:

- *Ebla in the Period of the Amorite Dynasty and the Dynasty of Agade: Recent Archaeological Discoveries of Tell Mardikh.* By P. Matthiae.
- *Cuneiform Texts of the 3rd Millennium in Old-Canaanite from the 1974 Season at Tell Mardikh = Ebla.* By G. Pettinato.

#### **Volume 2**

- *Tales of the Old Gods and Other Essays.* By T. Jacobsen.

---

## AFROASIATIC DIALECTS

A series of grammars providing concise descriptions of individual languages within the Afroasiatic family, and directed to scholars and students in the given language areas as well as in linguistics.

Editors: Wolf Leslau and Thomas G. Penchoen

- Volume 1 (Berber). *Tamazight of the Ayt Ndhir*. By Thomas G. Penchoen. 124 pp. \$8.50.
- Volume 2 (Ancient Egyptian). *Middle Egyptian*. By John B. Callender. 150 pp. \$10.00.

In preparation:

- Volume 3 (Semitic). *Damascus Arabic*. By Arne Ambros.

---

## BIBLIOTHECA MESOPOTAMICA

Primary sources and interpretive analyses for the study of Mesopotamian civilization and its influences from late prehistory to the end of the cuneiform tradition.

- Volume 1. *Old Sumerian and Old Akkadian Texts in Philadelphia Chiefly from Nippur. Part 1. Literary and Lexical Texts and the Earliest Administrative Documents from Nippur*. By Aage Westenholz. xii-210 pp., 3 plates. \$18.50 (hardbound), \$12 (softbound).
- Volume 2. *Babylonian Planetary Omens. Part 1. The Venus Tablet of Ammišaduqa*. By Erica Reiner in collaboration with David Pingree. iv-60 pp. \$6.75 (softbound).
- Volume 3. *Inscriptions from Al-Hiba–Lagash: The First and Second Seasons*. By Robert D. Biggs. vi-45 pp., 2 plates.

In preparation:

- *The Legacy of Sumer*. Edited by D. Schmandt-Besserat.
- *The Economic Role of the Crown in the Old Babylonian Period*. By Norman Yoffee.
- *Seals and Sealings in Ancient Mesopotamia*. By McGuire Gibson and Robert D. Biggs.
- *Old Sumerian and Old Akkadian Texts in Philadelphia*. By Aage Westenholz.  
*Part 2. Late Sargonic Administrative Texts from Nippur: 'Akkadian' Texts, Legal Documents and the Onion Archive.*  
*Part 3. Late Sargonic Administrative Texts from Nippur: Ration Lists and Miscellaneous Accounts.*  
*Part 4. Presargonic and Sargonic Administrative Texts from Fara and Ur.*

## AFROASIATIC DIALECTS

---

Editors: Wolf Leslau (University of California, Los Angeles): Semitic and Cushitic  
Thomas G. Penchoen (University of California, Los Angeles): Berber

Advisory Board: Giorgio Buccellati (University of California, Los Angeles): Akkadian  
John Callender (University of California, Los Angeles): Ancient Egyptian  
Russell G. Schuh (University of California, Los Angeles): Chadic  
Stanislav Segert (University of California, Los Angeles): Northwest-Semitic

Afroasiatic Dialects (*AAD*) seeks to provide concise descriptions of individual languages which belong to the Afroasiatic language family. It is primarily directed toward an audience consisting, on the one hand, of students of one or several Afroasiatic languages, and, on the other, of students of linguistics. In these volumes, both these groups should find succinct treatises such as to provide familiarity with the basic structure of the language in question in a comparative perspective. Each description will be comprehensive in scope and sufficiently detailed in exemplification. But at the same time the aim will be to cut through to the essential and to avoid specialized argumentation. The goal then is neither to publish a corpus of exhaustive reference grammars nor to provide a platform for the analytical defense of theoretical questions. In this sense the series is properly data-oriented. Though the authors will necessarily be of a variety of theoretical persuasions and each will have his own set of preferences for presentation, not the least important goal will be to achieve as high a degree as possible of uniformity in structure, and in the conventional signs and terminology used. This being accomplished, the reader should have no difficulty in finding points of resemblance and divergence amongst the languages which concern him with regard to some point of inquiry. The term 'dialects' in the series' title refers not only to modern spoken vernaculars but to historically definable stages of any language of the various branches. Publication of studies of as many such dialects as possible would provide, we feel, both an encouragement to comparative work and a sound documentary base on which alone this work may fruitfully progress.

---

**AAD 1 - Berber:** *TAMAZIGHT OF THE AYT NDHIR* by Thomas G. Penchoen. 1973, IV-124 pp., \$8.50.

The Ayt Ndhir dialect which is described belongs to one of the major Berber languages, Tamazight, spoken in the Middle Atlas Mountains of central Morocco. The description is based in the main on research undertaken with native speakers of the Ayt Ndhir territory surrounding El Hajeb. — While directed to the non-specialist, a number of points in the description proper will be of interest to the specialist as well: the presentation of noun and verb morphology points up a number of regularities which more often than not have been obscured in previous descriptions. Also, phonological rules are given which account for the major share of morphophonemic complexities. The reader will find in the appendices and 'optional' sections conjugation tables of typical verbs—including detailed observations on the placement of shwa in verbs—, a chart showing the main morphological patterns involved in verb derivation, a description of the phonological rules applying in complex sequences of morphemes of the verb group, the 'basic' vocabulary contained in several well-known lexicostatistic word lists, and a chart of the Tifinay alphabet used by the Tuareg.

**AAD 2 - Ancient Egyptian:** *MIDDLE EGYPTIAN* by John Callender. 1975, 150 pp., \$10.

This grammar deals with the literary language used in Egypt from ca. 2000 to 1200 B.C. and considered in even later times to be the classical written form of Egyptian. The book is directed toward the general linguist as well as the Egyptologist; examples are glossed and written in transcription and there is an index of grammatical terms and Egyptian morphemes. A comprehensive set of paradigms of both verbal and non-verbal predicate types is included as an appendix, together with an appendix on negation and one on the historical origin of certain constructions. — The grammar contains three main parts: phonology, morphology, and syntax, of which the last receives most emphasis. The section on phonology sketches the laws of sound change to the extent they can be discovered. The section on morphology stresses the paradigmatic character of verb tenses and their derivations. A distinction is made between truly paradigmatic tenses and tenses borrowed from Old Egyptian for quotations or special effect. Following Polotsky, the "emphatic forms" are treated as nominalizations under the rubric "manner nominalizations." Unlike previous grammars of Egyptian, this grammar discusses syntax according to transformational categories. The process of "clefting" interrelates emphatic forms, the "participial statement" and constructions with *pw*+ relatives. The process character of negation is emphasized, and the implications of so considering it are developed in a special appendix. A sample text is also included, accompanied by a vocabulary and a translation.

**AAD 3 - Semitic:** *DAMASCUS ARABIC* by Arne Ambros. In preparation.

---

All prices are postpaid. Payment must accompany orders from individuals. A handling fee of 80¢ will be charged to libraries if order is not prepaid. Discount of 20% on all orders received within one year of publication date.  
Order from: UNDENA PUBLICATIONS, P.O. Box 97, Malibu, California 90265, U.S.A.



AAL includes contributions in linguistics within the vast domain of Afroasiatic (Hamito-Semitic) languages. Articles of general, theoretical interest using Afroasiatic material, descriptive, historical and comparative studies are included.

Editor: Robert Hetzron (1346 San Rafael, Santa Barbara, Ca. 93109, U.S.A.)

Advisory Board: A Bloch, J. B. Callender, T. Givón, T. G. Penchoen, S. Segert.

### Volume One

1. P. Newman and R. G. Schuh, *The Hausa Aspect System*, 38 pp.
2. J. L. Malone, *The Development of the Anomalous Syriac Verb eškāh 'To Find': A Case of Convergent Factors in Linguistic Change*, 10 pp.
3. R. Hetzron, *Extrinsic Ordering in Classical Arabic*, 25 pp.
4. T. Givón, *Verb Complements and Relative Clauses: A Diachronic Case Study in Biblical Hebrew*, 22 pp.
5. T. M. Johnstone, *The Modern South Arabian Languages*, 29 pp.
6. B. W. Andrzejewski, *Indicator Particles in Somali*, 69 pp.
7. H. Minkoff, *Graphemics and Diachrony: Some Evidence from Hebrew Cursive*, 16 pp.

### Volume Two

1. D. R. Cohen, *Subject and Object in Biblical Aramaic: A Functional Approach Based on Form-Content Analysis*, 23 pp.
2. C. D. Johnson, *Phonological Channels in Chaha*, 13 pp.  
R. Hetzron, *The t-Converb in Western Gurage (The Role of Analogy in Historical Morphology)*, 12 pp.
3. A. Barnea, *Reference to Time, Space and Other Types of Quantification in the City Dialect of Gaza*, 10 pp.  
R. Nir, *The Survival of Obsolete Hebrew Words in Idiomatic Expressions*, 7 pp.
4. C. T. Hodge, *The Nominal Sentence in Semitic*, 7 pp.  
G. Janssens, *The Semitic Verbal Tense System*, 6 pp.
5. S. Segert, *Verbal Categories of some Northwest Semitic Languages: A Didactical Approach*, 12 pp.
6. J. B. Callender, *Afroasiatic Cases and the Formation of Ancient Egyptian Constructions with Possessive Suffixes*, 18 pp.
7. J. L. Malone, *Systematic vs. Autonomous Phonemics and the Hebrew Grapheme Dagesh*, 17 pp.
8. T. Givón, *On the Role of Perceptual Clues in Hebrew Relativization*, 17 pp.
9. A. D. Corré, *Wāw and Digamma*, 7 pp.  
Id., *A Suprasegmental Feature of Length in Semitic*, 6 pp.
10. Bibliographical Bulletin, 61 pp.

### Volume Three

1. R. G. Schuh, *The Chadic Verbal System and Its Afroasiatic Nature*, 14 pp.
2. G. Buccellati, *On the Akkadian "Attributive" Genitive*, 9 pp.  
Id., *The Case Against the Alleged Akkadian Plural Morpheme -ānū*, 3 pp.
3. R. Hetzron, *The Agaw Languages*, 45 pp.
4. J. Saib, *Schwa Insertion in Berber: Un Problème de Choix*, 13 pp.
5. R. Steiner, *On the Origin of the ḥēḏer ~ ḥāḏār Alternation in Hebrew*, 18 pp.  
D. Boyarin, *The Loss of Final Consonants in Babylonian Jewish Aramaic (BJA)*, 5 pp.  
I. Avinery, *The Position of the Declined kl in Syriac*, 2 pp.
6. A. Zaborski, *The Semitic External Plural in an Afroasiatic Perspective*, 9 pp.  
Id., *Consonant Apophony and Consonant Alternation in Bilin Plurals*, 12 pp.
7. E. Rubinstein, *On the Mechanism of Semantic Shift: Causation of Symmetric Locativity*, 10 pp.
8. Bibliographical Bulletin, 23 pp.
9. P. Abboud, *On Ablaut in Cairo Arabic*, 21 pp.

---

Subscription to one volume of about 200 pp.: \$12.50.

Individual issues available separately.

Descriptive flyers, with complete list of abstracts and prices for individual issues, are free on request.

Write to: UNDENA PUBLICATIONS, P.O.B. 97, Malibu, California 90265, U.S.A.